

**The Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1-36. (Cancelled)

37. (Previously presented) An isolated nucleic acid that encodes a fusion polypeptide, wherein the fusion polypeptide comprises:

- a) an  $\alpha$ -2,3-sialyltransferase that catalyzes the transfer of a sialic acid, from CMP-Neu5Ac, to an acceptor molecule; and
- b) a CMP-Neu5Ac synthetase that catalyzes the formation of CMP-Neu5Ac from Neu5Ac and CTP.

38. (Previously presented) The nucleic acid of claim 37, wherein the  $\alpha$ -2,3-sialyltransferase and the CMP-Neu5Ac synthetase are joined by a peptide linker.

39. (Previously presented) The nucleic acid of claim 37, wherein the nucleic acid further comprises a polynucleotide that encodes a signal sequence which is linked to the fusion polypeptide

40. (Previously presented) The nucleic acid of claim 37, wherein the nucleic acid further comprises a polynucleotide that encodes a molecular tag which is linked to the fusion polypeptide.

41. (Previously presented) The nucleic acid of claim 37, wherein the  $\alpha$ -2,3-sialyltransferase is a bacterial enzyme.

42. (Previously presented) The nucleic acid of claim 41, wherein the  $\alpha$ -2,3-sialyltransferase is a *Neisseria* enzyme.

43. (Previously presented) The nucleic acid of claim 37, wherein the CMP-Neu5Ac synthetase is a *Neisseria* enzyme.
44. (Previously presented) An expression vector which comprises the nucleic acid of claim 37.
45. (Previously presented) A host cell which comprises the expression vector of claim 45.
46. (Previously presented) A method of producing a fusion polypeptide, the method comprising:
- a) introducing into a host cell the expression vector of claim 45, under conditions where the host cell is transformed with the expression vector; and
  - b) culturing the transformed host cell under conditions where the fusion polypeptide is expressed in the transformed host cell.
47. (Previously presented) The method of claim 47 further comprising a step of purifying the expressed fusion polypeptide.
48. (Previously presented) The method of claim 47 further comprising a step of permeabilizing the host cell expressing the fusion polypeptide.